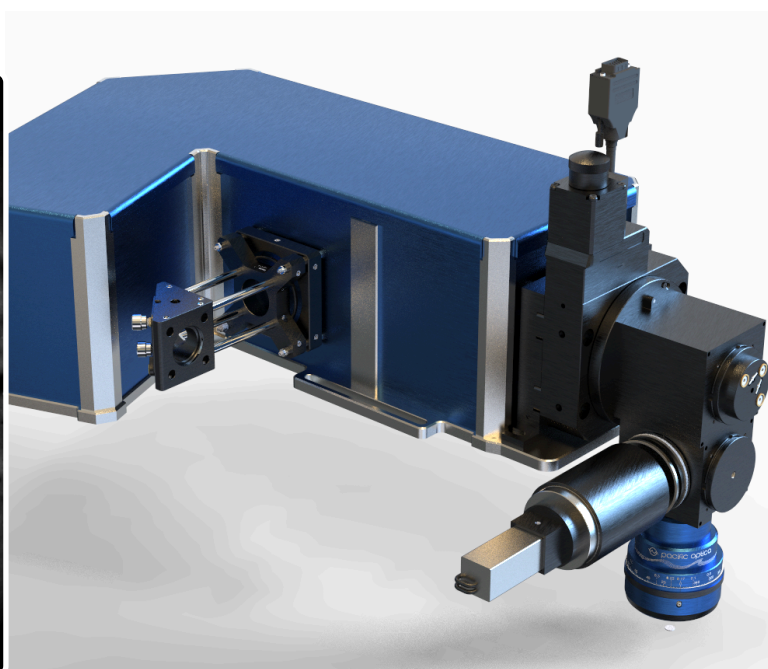
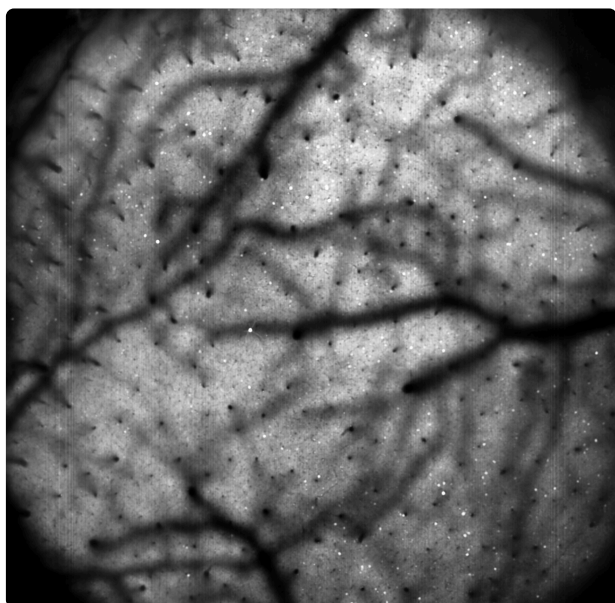


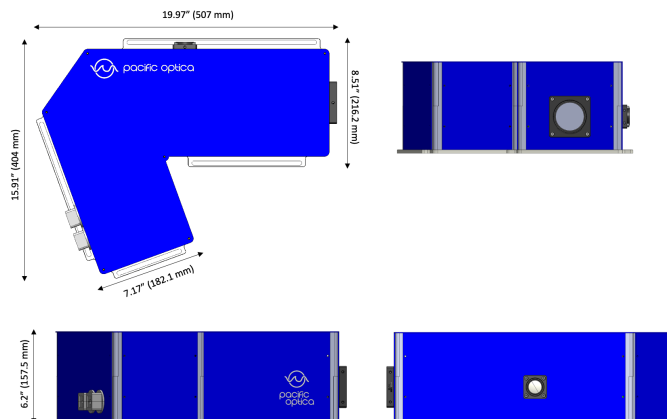
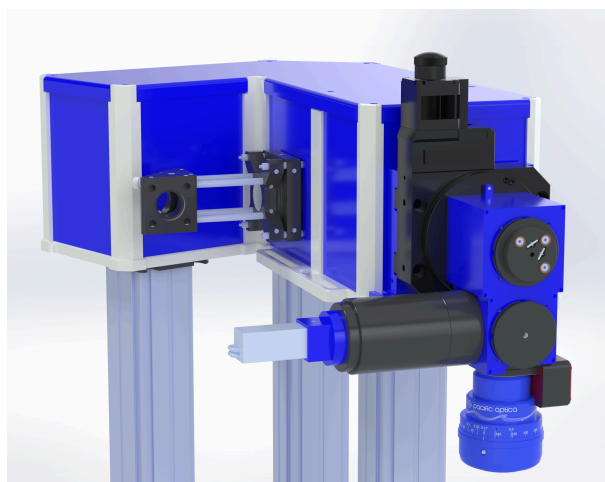


pacific
optica

Ventana Wide



- **[SCAN ENGINE]** Our patented scan multiplying technique, along with proprietary scan optics, provides a large 20 mm diameter beam, which is scanned a full +/- 5 degrees at 16,000 lines/s at the back pupil of the objective. There's nothing else like it on the market.
- **[FOV]** It unlocks huge fields-of-view (FOVs) with any objective. The FOV is 10 mm² with a 10x objective like the popular Cousa long working distance objective.
- **[COMPATIBILITY]** Infinity corrected and fully compatible with temporal multiplexing, lightbeads, Bessel beams, holography, and more.
- **[OBJECTIVES]** Compatible with conventional multiphoton objectives from Nikon, Zeiss, etc. Adapters for all major systems are available. The scan engine is infinity corrected and provides a 20 mm diameter beam at the objective for high NA, large FOV imaging.
- **[FOOTPRINT]** The system is compact like conventional in vivo 2p imaging systems. Fits on a standard optical table, and is highly customizable.
- **[OPTIONS]** Options include rotating objective mount, fast z-focus changes, auxiliary port for optogenetics, and more.



Specification	Value	Notes
Scan engine	Resonant	16,000 lines/s
Field-of-view (Cousa)	3.2 mm x 3.2 mm	10 mm ² in area with a 10x like the Cousa
Scan performance	20 mm diameter, +/- 5 degrees	Compatible with other 2p/3p objectives
Field number (FN)	> 45	Diffraction-limited at the scan engine
Scan speed at 512 x 32	500 frames/s	Across the full FOV
Scan speed at 512 x 512	31.3 frames/s	Across the full FOV
Scan speed at 1024 x 1024	15.6 frames/s	Across the full FOV
Objective rotation range	360 degrees	Any angle, including inverted
Wavelength range	475 nm - 1100 nm	Optimized for 910 nm and 1050 nm
Resonant scan axis	Full field @ 16,000 lines/s	Widest resonant scanning ever
Detection	GaAsP PMT or SIPM	High sensitivity, robust
Footprint	75 cm x 120 cm	Height is adjustable
Power requirements	Typically < 4 kW	Depends on configuration
Full peer-reviewed report	Click here	Open access publication

For high resolution imaging, two-photon imaging systems need to provide a **large diameter beam** to the back pupil of the objective. This is to use the full numerical aperture (NA), or spatial resolution, of the imaging system. If the beam is too small, the resolution of the imaging system will suffer. The Ventana system provides a bright and wide, full 20 mm diameter beam across the full scan range.

For large field-of-view high speed imaging, two-photon imaging systems need to scan that large diameter beam across **a large range of scan angles** at the back pupil of the objective. The Ventana Wide system uses proprietary scan optics and a patented scan engine to achieve an unprecedented combination of speed, resolution, and field-of-view.

Objective	FOV	Notes
Pacific Optica Cousa 10x/0.5 NA	3.2 mm x 3.2 mm	10 mm ² in area
Pacific Optica Avocado 12x/0.6 NA	3.0 mm x 3.0 mm	New product!
Nikon 16x/0.8 NA	2.0 mm x 2.0 mm	Limited by the objective's performance
Zeiss 25x/1.1 NA	1.3 mm x 1.3 mm	Limited by the objective's performance